

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1-53. (Canceled)

54. (Currently Amended) A method of inducing [[an]] a protective immune response against human immunodeficiency virus (HIV) or an HIV epitope in a human mammal, the method comprising:

administering to the human mammal a nucleic acid composition comprising (a) at least ~~three and no more than five~~ four sets of nucleic acid molecules encoding wild-type HIV envelope glycoproteins, wherein each of the sets of nucleic acid molecules encodes an envelope glycoprotein of a different primary isolate including at least a clade A primary isolate, a clade B primary isolate, a clade C primary isolate, and a clade E primary isolate, and (b) a set of nucleic acid molecules encoding [an] a wild-type HIV gag protein of a primary isolate of clade C; and

thereafter administering to the human mammal a protein composition comprising a plurality of sets of isolated wild-type HIV envelope glycoprotein molecules of each of the primary isolates in (a),

wherein the nucleic acid composition and the protein composition are administered in amounts sufficient to elicit [[an]] a protective immune response against a current or future infection with HIV or an HIV epitope in the human mammal.

55. (Currently Amended) The method of claim 54, further comprising isolating immune cells from the human vertebrate mammal; and testing an immune response of the isolated immune cells in vitro.

56. (Canceled)

57. (Currently Amended) The method of claim [[56]] 54, wherein the protein composition is administered between 4 and 8 weeks after the nucleic acid composition.

58. (Previously presented) The method of claim 54, further comprising testing for a cell-mediated immune response.

59. (Previously presented) The method of claim 54, further comprising testing for a humoral immune response.

60. (Currently Amended) The method of claim 59, wherein a neutralizing humoral response is tested.

61-80. (Canceled)

81. (Previously presented) The method of claim 54, wherein a cell-mediated immune response is induced.

82. (Previously presented) The method of claim 54, wherein a humoral immune response is induced.

83. (Previously presented) The method of claim 82, wherein a neutralizing humoral immune response is induced.

84. (Previously presented) The method of claim 54, wherein the nucleic acid molecules comprise DNA plasmids.

85. (Previously presented) The method of claim 54, wherein the HIV envelope glycoproteins encoded by the nucleic acid molecules comprise one or more of gp120, gp140, gp160, and gp41.

86-87. (Canceled)

88. (Previously presented) The method of claim 85, wherein the HIV envelope glycoproteins encoded by the nucleic acid molecules comprise a gp120 envelope glycoprotein.

89-93. (Canceled)

94. (Previously presented) The method of claim 54, wherein the nucleic acid composition comprises a set of nucleic acids encoding an envelope glycoprotein of a B715 isolate.

95. (Canceled)

96. (Previously presented) The method of claim 54, wherein one or more of the sets of nucleic acid molecules comprises optimized codons.

97-99. (Canceled)

100. (Previously presented) The method of claim 54, wherein the envelope glycoprotein of each set is selected from the group consisting of gp120, gp140, gp160, and gp41.

101-106. (Canceled)

107. (Previously presented) The method of claim 54, wherein the protein composition comprises a set of envelope glycoprotein molecules of a B715 isolate.

108-114. (Canceled)

115. (Previously presented) The method of claim 54, wherein the nucleic acid composition comprises a set of nucleic acid molecules encoding an envelope glycoprotein of a Ba-L isolate, and the protein composition comprises a set of isolated envelope glycoprotein molecules of a Ba-L isolate.

116. (Previously presented) The method of claim 94, wherein the nucleic acid composition further comprises a set of nucleic acid molecules encoding an envelope glycoprotein of a Ba-L isolate.

117. (Previously presented) The method of claim 107, wherein the protein composition further comprises a set of envelope glycoprotein molecules of a Ba-L isolate.

118. (Canceled)

119. (Previously presented) The method of claim 115, wherein the gag protein is a gag protein of a Czm isolate.

120. (Previously presented) The method of claim 54, wherein the set of nucleic acid molecules encoding the gag protein comprises optimized codons.

121. (Previously presented) The method of claim 54, wherein the protein composition is administered with an adjuvant.

122. (Currently Amended) The method of claim [[118]] 121, wherein the adjuvant is QS-21.

123. (New) The method of claim 54, wherein the sets of nucleic acid molecules encode wild-type HIV envelope gp120 glycoproteins from primary isolates A, B715, Ba-L, Czm, and E, and wherein the wild-type HIV gag protein is from primary isolate Czm.